

The Honorable Michelle L. Peterson

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

CITY OF SEATTLE,

Plaintiff,

V.

MONSANTO COMPANY, et al.,

Defendants.

No. 2:16-cv-00107-RAJ-MLP

**PLAINTIFF'S OPPOSITION TO
DEFENDANTS' MOTION TO
EXCLUDE PROPOSED EXPERT
TESTIMONY BY DR. LISA
RODENBURG**

**NOTE ON MOTION CALENDAR:
August 26, 2022**

ORAL ARGUMENT REQUESTED

PL. OPPOSITION TO DEF'S.
MOTION EXCLUDE EXPERT
TESTIMONY BY DR. LISA
RODENBURG
(2:16-cv-00107-RAJ-MLP) - i

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I. INTRODUCTION

Monsanto’s motion to exclude, or alternatively limit, the testimony of Dr. Lisa Rodenburg should be denied. Dr. Rodenburg opines that Monsanto’s PCBs, and not byproduct PCBs, are the dominant source of PCBs to all seven environmental compartments of the Lower Duwamish Waterway (“LDW”) that Dr. Rodenburg examined. Specifically, Dr. Rodenburg concluded that Monsanto’s PCBs comprise: (i) over 99% of PCBs in LDW sediment, surface water, groundwater, and the tissue of organisms from the LDW; (ii) 99% of PCBs in otter scat gathered on the banks of the LDW; (iii) over 95% of PCBs in stormwater drainage pipes connected to the LDW; and (iv) at least 87% of PCBs in samples of air deposition from near the LDW.

Dr. Rodenburg is extraordinarily well qualified to offer these opinions. Monsanto does not challenge her qualifications.

Dr. Rodenburg bases her opinions on methods that are accepted in her field, have been the subject of numerous peer reviewed papers, and that she herself pioneered. And she uses reliable data to conduct her analysis. The majority of the data was collected and vetted in connection with a study by the Washington Department of Ecology regarding the Green-Duwamish River watershed, which Dr. Rodenburg participated in before being retained in connection with this litigation. Dr. Rodenburg’s opinions will help the trier of fact understand the contribution of Monsanto’s PCBs to overall PCB contamination in the LDW.

Monsanto's criticism of Dr. Rodenburg for relying on the same data used in her previous, non-litigation reports for the Washington Department of Ecology regarding sources of PCBs to the Green-Duwamish River watershed, which includes data from samples taken in parts of the watershed outside of the LDW, and its various attempts to nit-pick the methodology she employs, all fall flat. While Monsanto is welcome to explore these issues with Dr. Rodenburg on cross-examination, none of them provide a basis on which to exclude her testimony regarding any of the opinions expressed in her report or her rebuttal report.

1 **II. LEGAL STANDARD FOR THE ADMISSIBILITY OF EXPERT TESTIMONY**

2 Under Federal Rule of Evidence 702, “a witness who is qualified as an expert by
 3 knowledge, skill, experience, training, or education may testify” if:

4 (a) the expert’s scientific, technical, or other specialized knowledge will help the
 5 trier of fact to understand the evidence or to determine a fact in issue; (b) the
 6 testimony is based on sufficient facts or data; (c) the testimony is the product of
 7 reliable principles and methods; and (d) the expert has reliably applied the
 8 principles and methods to the facts of the case.

9 Fed. R. Evid. 702.

10 Under Rule 702(a), expert testimony must be relevant; “[w]hat is relevant depends on
 11 what must be proved.” *Primiano v. Cook*, 598 F.3d 558, 567 (9th Cir. 2010), *as amended* (Apr.
 12 27, 2010). Subsection 702(b) requires that an expert’s testimony “is based on sufficient facts or
 13 data.” Fed. R. Evid. 702(b).

14 Under 702(c), a “court must assess the expert’s reasoning or methodology, using as
 15 appropriate criteria such as testability, publication in peer-reviewed literature, known or
 16 potential error rate, and general acceptance.” *City of Pomona v. SQM N. Am. Corp.*, 750 F.3d
 17 1036, 1044 (9th Cir. 2014) (citation omitted). The question is whether an expert’s methodology
 18 can be “challenged in some objective sense, or whether it is instead simply a subjective,
 19 conclusory approach that cannot reasonably be assessed for reliability.” *Id.* at 1046 (quoting
 20 Fed. R. Evid. 702 Advisory Committee’s Note to 2000 Amendments).

21 **III. ARGUMENT**

22 **A. Dr. Rodenburg, a World-Leading Expert on PCB Fingerprinting, Conducted the
 23 Analysis that Is the Foundation of the Opinions Expressed in Her Report for the
 24 Washington Department of Ecology in a Non-Litigation Context**

25 Monsanto does not challenge Dr. Rodenburg’s qualifications because her qualifications
 26 are beyond reproach. Dr. Rodenburg is among the world’s foremost authorities on the chemical
 fingerprinting of PCBs. Over the past twenty years, Dr. Rodenburg has authored more than ten
 peer-reviewed articles regarding source apportionment of PCBs in the environment, six peer-
 reviewed articles regarding dechlorination of PCBs, a peer-reviewed article regarding

1 metabolism of PCBs, a peer-reviewed article regarding the impact of blank contamination on
 2 PCB fingerprinting, and numerous other peer-reviewed articles regarding the chemical
 3 fingerprinting of similar compounds such as chlorinated benzenes, dioxins, furans, PAHs, and
 4 perfluoroalkyl substances. Declaration of Lisa N. DeBord in Support of Defendants' *Daubert*
 5 Motion to Exclude the Expert Testimony of Lisa Rodenburg ("DeBord Decl."), Ex. A, Lisa A.
 6 Rodenburg, Fingerprinting of PCB congener patterns in samples from the Lower Duwamish
 7 Waterway (Nov. 18, 2021) ("Rodenburg Report") at 34–39. Her works have been cited over
 8 1,000 times. *Id.* at 1.

9 Dr. Rodenburg pioneered the use of Positive Matrix Factorization—a type of factor
 10 analysis—to understand the sources of PCBs to complex ecosystems. *Id.* Other scientists have
 11 employed the same methodology to examine the sources of PCBs to the environment. *Id.* at 10.

12 In 2016–2017, Dr. Rodenburg applied the methodology she pioneered to conduct an
 13 analysis of PCB sources to the Green-Duwamish River system for the Washington Department
 14 of Ecology. *Id.* at 3. The project is described in a report by Dr. Rodenburg as follows:

15 Ecology has, therefore, funded a PCB Congener Study in two phases. Phase 1
 16 provided an introduction to PCBs. During Phase 1, Leidos compiled a database
 17 of available PCB congener data in the Green-Duwamish River watershed (Leidos
 18 2016). These data included approximately 1,400 samples analyzed for a subset or
 full suite of PCB congeners in various media, including sediment, tissue, surface
 water, storm drain solids, stormwater, and air deposition samples.

19 The objective of Phase 2 was to conduct PCB source evaluation using multi-
 20 variate statistical analysis ("fingerprinting") for the purpose of recommending
 21 one or more PCB congeners, suites of congeners, homologs, or Aroclor(s) to be
 22 included in the [pollutant loading assessment] modeling efforts, and to provide
 23 information on potential PCB sources to LDW sediments and surface water.
 24 Positive matrix factorization (PMF) was selected as the statistical technique used
 25 for this study. An initial data assessment was conducted (Leidos and Rodenburg
 26 2017), which refined the data sets to be used in the PMF model and determined
 that at least some available data from all five environmental compartments (air,
 surface water, sediment, storm drains, and biological tissues) were suitable for
 use (Appendix A).

1 Declaration of Keil Mueller in Support of Plaintiff's Opposition to Defendants' Motion to
 2 Exclude Expert Testimony by Dr. Lisa Rodenburg ("Mueller Decl."), Ex. A, Green-Duwamish
 3 River Watershed PCB Congener Study: Phase 2 Source Evaluation Report at 1.

4 Significantly, Dr. Rodenburg conducted this analysis, which is the foundation of the
 5 opinions expressed in her report in this case, in a non-litigation context. DeBord Decl., Ex. A,
 6 Rodenburg Report at 3. The specific PCB data that she evaluated was collected using EPA
 7 Method 1668, which was first published in 1999. *Id.* at 5. EPA Method 1668 uses a high-
 8 resolution mass spectrometer couple with high-resolution gas chromatography to measure
 9 PCBs. *Id.* Further details about her methodology can be found in her report.

10 Dr. Rodenburg uses these tools and methods to identify whether PCBs found in the
 11 environment are those of Monsanto (also referred to by their trade name, Aroclor) or produced
 12 inadvertently during various chemical processes such as the production of pigments. The latter
 13 are referred to as "byproduct" PCBs.

14 In her report in this case, Dr. Rodenburg relied on the analysis she conducted on behalf
 15 of the Washington Department of Ecology to address the sources of PCBs to the LDW—a
 16 portion of the Green-Duwamish River system. *Id.* at 3. Dr. Rodenburg also performed an
 17 analysis of additional water column data that became available only after she completed her
 18 analysis for the Washington Department of Ecology. *Id.* Dr. Rodenburg's report interprets the
 19 results of this new water column analysis as well. *Id.*

20 Few, if any, experts in the world are better qualified to opine on the issues addressed in
 21 Dr. Rodenburg's report. And Dr. Rodenburg's opinions plainly are relevant to the issues in this
 22 case and will assist the trier of fact in determining the relevant contribution of Monsanto's PCBs
 23 to total PCB contamination in the LDW. Monsanto can critique Dr. Rodenburg's methodology
 24 at trial. And Monsanto could have offered its own analysis of the available data in an attempt to
 25 show that Dr. Rodenburg overstates the contribution of Monsanto's PCBs to total PCB

1 contamination in the LDW, but it chose not to and offers no expert testimony on an alternative
 2 percentage of Monsanto versus byproduct PCBs in the LDW.

3 There simply is no reason to exclude Dr. Rodenburg from testifying. If anything,
 4 Monsanto's criticisms of Dr. Rodenburg's methodology demonstrate that her opinions can be
 5 "challenged in some objective sense," and therefore can reasonably be assessed for reliability.
 6 See *City of Pomona*, 750 F.3d at 1046 (quoting Fed. R. Evid. 702 Advisory Committee's Note
 7 to 2000 Amendments). Because Dr. Rodenburg's methodologies can be and have been tested,
 8 there is no reason to exclude her testimony. See *id.* at 1048.

9 **B. The Data on which Dr. Rodenburg Relies Is Reliable and Sufficient to Support the
 10 Opinions She Offers**

11 As discussed above, except for her analysis of new water column data, Dr. Rodenburg's
 12 opinions regarding the environmental compartments she investigated are based on her
 13 interpretation of the analysis she previously conducted for the Washington Department of
 14 Ecology. The results of Dr. Rodenburg's analysis are set forth in two reports issued in 2017 and
 15 2018 (the "GD Reports"). The data Dr. Rodenburg analyzed in the GD Reports had previously
 16 been compiled at an earlier stage of the Washington Department of Ecology's investigation of
 17 the Green-Duwamish River system. DeBord Decl., Ex. A, Rodenburg Report at 3; see also
 18 DeBord Decl., Ex. E, Leidos (2016). Prior to conducting her analysis, Dr. Rodenburg evaluated
 19 the quality of the available data and determined that the data was sufficient to generate reliable
 20 PMF fingerprints for each environmental compartment except the water column because, at the
 21 time, not enough data existed regarding the congener makeup of PCBs in the water column.
 22 DeBord Decl., Ex. A, Rodenburg Report at 3–4.

23 In connection with her report in this case, Dr. Rodenburg analyzed additional data
 24 available from more recent water column sampling in the LDW. *Id.* With this additional data,
 25 Dr. Rodenburg determined that the data now is sufficient to reach a reliable conclusion
 26 regarding the sources of PCBs to the water column as well. *Id.* at 4.

1 As Dr. Rodenburg states in her report:

2 [A]ll data used in the GD reports went through careful quality assurance
 3 procedures, not only during the initial collection of the data, but also during the
 4 storage, management, and transmission of the data. In addition, we conducted a
 5 careful analysis of the uncertainty in the results and concluded that the results
 6 were reliable for most media, including sediment, tissue, atmospheric deposition,
 7 and stormwater/storm solids. The one medium for which the results were not
 8 reliable was water, due to a limited amount of data. This is no longer a concern
 9 [for this report] because additional water samples were analyzed for this report.

10 *Id.* at 3–4.

11 Monsanto does not suggest that either the data Dr. Rodenburg analyzed in the GD
 12 Reports or the additional water column data she analyzed in connection with her report in this
 13 case is inaccurate or erroneous, or that any data was corrupted at any stage of the data
 14 collection, storage, or management process. *Cf. Henricksen v. ConocoPhillips Co.*, 605 F. Supp.
 15 2d 1142, 1163 (E.D. Wash. 2009) (excluding testimony where opinion was based on “erroneous
 16 data”). Rather, Monsanto contends that the data is unreliable because some of it comes from
 17 samples taken outside of the five-mile stretch of river that constitutes the LDW.

18 Dr. Rodenburg explained at her deposition, however, that including data from parts of
 19 the watershed outside the LDW is appropriate because “the Duwamish [is] a tidal system, and
 20 so the water is flowing back and forth, the sediment moves with the water back and forth, the air
 21 is moving, the otters, the fish, and the biota are moving.” Mueller Decl., Ex. B, Rodenburg Dep.
 22 Transcript at 305:5–306:12. Accordingly, these areas adjacent to the LDW “are all connected in
 23 term of movement of these different things, which is also carrying the PCBs with them. So the
 24 PCB sources should be similar near . . . the [LDW] to what is actually in the [LDW].” *Id.*
 25 Further, Dr. Rodenburg confirmed that the PMF model was a good match for the LDW-specific
 26 data by comparing the model’s output to samples taken within the LDW. *Id.* at 306:14–307:6.¹

1 Much of the data to which Monsanto objects is from samples taken at Harbor Island, the southern tip of which is
 2 the downstream border of the LDW. *Id.* 92:16–23; 109:8–110:2. Using data from one edge of the relevant area
 3 can hardly be reason to exclude an expert’s testimony, especially where there is no question that the data itself is
 4 accurate and reliable.

1 Dr. Rodenburg ultimately determined that she had sufficient data to reach the opinions set forth
 2 in her report. *Id.* at 310:7–11.

3 Notably, Monsanto could have, but did not, offer any alternative analysis based only on
 4 data from samples taken inside the LDW. In any event, “the ‘factual basis of an expert opinion
 5 goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party
 6 to examine the factual basis for the opinion in cross-examination.’” *Bluetooth SIG, Inc. v. FCA*
 7 *US LLC*, 468 F. Supp. 3d 1342, 1349 (W.D. Wash. 2020) (quoting *In re Toyota Motor Corp.*
 8 *Unintended Acceleration Mktg., Sales Practices, & Prod. Liab. Litig.*, 978 F. Supp. 2d 1053,
 9 1069 (C.D. Cal. 2013)). Monsanto can critique the data on which Dr. Rodenburg relies at trial,
 10 and the trier of will determine what weight to give to her opinions. There is no basis on which to
 11 exclude her testimony.

12 Finally, the boilerplate language on the inside cover of Leidos’s PCB Congener Study:
 13 Phase 1 report, *see* DeBord Decl., Ex. E Leidos (2016) at PDF 2, does not undermine the
 14 detailed discussion of the data acquisition and management process set forth in that report. *See*
 15 *id.* at 87–125. Nor does it provide any basis to exclude Dr. Rodenburg’s testimony in this case.
 16 The situation here is nothing like *Waskowski v. State Farm Mut. Auto. Ins. Co.*, 970 F. Supp. 2d
 17 714 (E.D. Mich. 2013), where the court found that “record evidence . . . d[id] not support . . .
 18 assumptions” relied on by plaintiff’s expert “based on a representation from Plaintiff’s Counsel.”
 19 970 F. Supp. 2d at 722–23.

20 **C. The Methodology which Dr. Rodenburg Employs Is Reliable and Dr. Rodenburg
 21 Reliably Applied this Methodology to the Available Data**

22 Dr. Rodenburg employs a two-step methodology to determine the source of PCBs to
 23 various environmental compartments—*i.e.*, whether those PCBs were produced by Monsanto or
 24 whether they may have been inadvertently created as the result of other manufacturing processes
 25 (byproduct PCBs). First, Dr. Rodenburg employs a factor analysis using PMF to generate
 26 “fingerprints” of PCB congeners detected in the samples that provide the data for the analysis.

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1 DeBord Decl., Ex. A (Rodenburg Report at 10–11. Second, Dr. Rodenburg then interprets the
 2 fingerprints using multiple lines of evidence. *Id.* at 11–14.

3 At the first step, the PMF analysis “looks for patterns that exist in the data.” *Id.* at 10. It
 4 does not seek to identify only Monsanto’s PCBs, nor does it assume that certain PCB congeners
 5 are associated with Monsanto’s PCBs as opposed to other sources. *Id.* Instead it produces
 6 fingerprints of congeners that are found to be present in most of the samples analyzed. *Id.* Like
 7 all data analysis methodologies, PMF analysis requires some processing of the available data.
 8 *Id.* “[F]or the PMF program to reliably identify sources, it needs to have an adequate quantity of
 9 data and the data needs to be of sufficient quality.” *Id.* at 11. Among other things, the PMF
 10 program requires data with “a relatively low proportion of non-detects to yield reliable results.”²
 11 *Id.* This requires excluding some samples with a high number of non-detects. *Id.* at 19.

12 Monsanto’s criticism of Dr. Rodenburg for excluding certain data is misplaced. *See Mot.*
 13 at 7–8. This is exactly what is required by the analysis Dr. Rodenburg and other scientists have
 14 employed to identify sources of PCBs to the environment in numerous peer-reviewed papers.
 15 Mueller Decl., Ex. B, Rodenburg Dep. Transcript at 304:16–305:3. Monsanto’s repeated
 16 insinuation that Dr. Rodenburg intentionally excluded *byproduct* PCB mass from her analysis is
 17 wrong. *See id.* As Dr. Rodenburg testified, it is not possible to determine whether the source of
 18 excluded PCB mass was Monsanto’s PCBs or byproduct PCBs. *Id.* at 206:18–207:2. Among
 19 other things, most of PCB congeners that have been identified as potentially associated with
 20 byproduct PCBs also are contained in Monsanto’s Arcolors. *Id.* at 52:22–53:10. Accordingly, by
 21 excluding certain data to limit the number of non-detects and to allow the PMF analysis to
 22 reliably identify sources of PCBs—a normal and accepted part of the scientific method—
 23 Dr. Rodenburg did not, and could not have, intentionally exclude byproduct PCBs.
 24

25
 26 ² A “non-detect” means that the concentration of a particular contaminant in the sample being tested is below the
 threshold necessary to detect a contaminant using the method employed by the laboratory that performed the test.

1 Proceeding to the second step, Dr. Rodenburg describes her methodology for
 2 interpreting the fingerprints generated by PMF analysis as “a ‘weight of evidence’ approach to
 3 identifying PCB sources.” DeBord Decl., Ex. A, Rodenburg Report at 12. As she explains, her
 4 choice of this methodology is informed in part by the fact that, despite the efforts of Dr.
 5 Rodenburg and others to identify non-Monsanto PCBs in the environment, significant quantities
 6 of non-Monsanto PCBs have been found in vanishingly few locations. Dr. Rodenburg and many
 7 other scientists have worked hard to determine the prevalence of non-Monsanto PCBs in the
 8 environment. *Id.* at 11. In 2002, PCBs from pigments were detected in treated effluent from a
 9 wastewater treatment plant in New Jersey, and in 2007, Dr. Rodenburg detected PCBs from
 10 titanium dioxide (a white pigment) in the Delaware River Basin. Since then, despite continued
 11 searching, the only additional source of inadvertently produced PCBs Dr. Rodenburg has
 12 identified in environmental samples is silicone products. *Id.* Her recent work, however, suggests
 13 that PCBs from silicone is usually an artifact of the use of silicone products in conducting
 14 sampling, and that silicone does not really contribute to PCBs in the environment. *Id.* In sum,
 15 byproduct PCBs have been found to be a significant source of PCBs to the environment in a
 16 very small number of cases.

17 Dr. Rodenburg further explains that, “[o]nce the PMF program generates factors or
 18 fingerprints, these are interpreted by examining their congener patterns as well as their
 19 spatial/temporal variations and any other available information.” *Id.* Among other things, PCBs
 20 in the environment “may have traveled a long way and have resided in the fish or sediment for a
 21 long time, which allows many weathering processes to alter their fingerprints somewhat, a
 22 process akin to the smudging of a human fingerprint over time.” *Id.* at 11–12. PCBs also may
 23 undergo a process of “microbial dechlorination,” in which they transform one congener into
 24 another. *Id.* at 12.

25 One line of evidence Dr. Rodenburg considers is correlation coefficient, or r^2 , between
 26 each fingerprint and Monsanto’s PCBs. *Id.* Each of Monsanto’s Aroclors consists of a specific

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1 mixture of the 209 individual PCB congeners. *Id.* at 13. Dr. Rodenburg compares each PMF-
 2 generated fingerprint to the fingerprints of each Aroclor, generating an r^2 value where 1.0
 3 indicates a perfect match. *Id.* at 12. Dr. Rodenburg interprets an r^2 value of 0.8 or higher as
 4 indicating an unweathered Monsanto Aroclor and an r^2 value between 0.4 and 0.8 as indicating a
 5 weathered Aroclor. *Id.* at 12. Dr. Rodenburg's interpretation is informed by the weathering and
 6 dechlorination processes PCBs may undergo in the environment. *Id.* Dr. Rodenburg has used the
 7 same interpretation in her peer-reviewed work. *Id.*; *see also* Mueller Decl., Ex. C, Chitsaz et al.
 8 (2020) at 3.

9 Another line of evidence Dr. Rodenburg considers is a visual examination of each
 10 fingerprint to determine whether the fingerprint contains PCB congeners representative of
 11 Monsanto's PCBs. *Id.* She also considers known historical uses of Monsanto's PCBs in the
 12 watershed as well as the presence, or absence, of factories that use other chemical processes that
 13 might inadvertently generate PCBs. *Id.* Dr. Rodenburg also considers whether any differences
 14 between a fingerprint and Monsanto's PCBs can be explained by weathering, including potential
 15 metabolism of PCBs by biota or bacteria that can result in dechlorination of the PCB molecule.
 16 *Id.*

17 Dr. Rodenburg also compares the fingerprints to non-Monsanto PCBs. *Id.* at 13. Just as
 18 she does with Monsanto's PCBs, Dr. Rodenburg calculates an r^2 value comparing each
 19 fingerprint to non-Monsanto PCBs. *Id.* For various reasons, these comparisons are less
 20 definitive than the comparison of a fingerprint to Monsanto's PCBs. *Id.* Nonetheless, Dr.
 21 Rodenburg calculated r^2 values comparing the fingerprints to known fingerprints of byproduct PCBs
 22 in silicone and pigments and examined any fingerprinted with an r^2 value greater than 0.4 to
 23 determine whether the correlation was based on multiple PCB congeners and not just one or two.
 24 *Id.*; *see also* Mueller Decl., Ex. B, Rodenburg Dep. Transcript at 307:7–22.

25 In sum, Dr. Rodenburg employed multiple lines of evidence to interpret the fingerprints
 26 generated by the PMF analysis. This thorough analysis led her to the conclusion that the source

1 of the vast majority of PCBs in each of the seven environmental compartments she analyzed is
 2 Monsanto's PCBs.

3 Monsanto offers various critiques of Dr. Rodenburg's interpretation of the fingerprints
 4 generated by PMF analysis, but each of its critiques is, at most, a challenge to whether the
 5 evidence supports Dr. Rodenburg's conclusions. They provide no basis for excluding
 6 Dr. Rodenburg's testimony.

7 Monsanto's critiques are remarkably similar to critiques the defendants in *United States*
 8 v. *Sanft*, No. CR 19-00258 RAJ, 2021 WL 5278766 (W.D. Wash. Nov. 13, 2021), made of the
 9 government's environmental chemistry expert in that case. In *Sanft*, the government's expert
 10 analyzed chemical measurements in sewers and concluded that the results were consistent with
 11 chemical profiles expected from drum-reconditioning facilities. *Id.* at *1. Defendants argued
 12 that the chemical profiles were too similar to profiles from other industries to draw any such
 13 conclusions. *Id.* The court framed Defendants' arguments as a challenge to the expert's
 14 reliability, as opposed to his qualifications or the relevance of his report. *Id.* at *2. The court
 15 concluded that the report was "reliable" because the expert had relied on "relevant and reliable"
 16 EPA reports to determine the expected chemical profiles. *Id.* The court did not address whether
 17 those reports had a valid connection to the expert's inquiry. Instead, the court reasoned that
 18 while "[d]efendants may disagree with Dr. Lowry's opinions and challenge the accuracy of the
 19 evidence supporting his conclusions, [] their challenge goes to the weight of his testimony, not
 20 its admissibility." *Id.*

21 Here, Monsanto criticizes Dr. Rodenburg for purportedly ignoring the fact that some
 22 congeners in certain of the fingerprints she interpreted are not explained by a particular
 23 Monsanto Aroclor. *See* Mot. at 6. Specifically, Monsanto reproduces a bar chart showing the
 24 PCB congener distribution for fingerprint "Air1", which produced an r^2 value of 0.79 when
 25 compared to Monsanto's Aroclor 1016. *Id.* While Monsanto contends that Aroclor 1016 cannot
 26 account for the presence of several higher weight congeners in Air1, this criticism does not

1 undermine the reliability of Dr. Rodenburg's methodology. First, Dr. Rodenburg analyzed and
 2 discussed Air1 in her GD reports, which were approved by the Washington Department of
 3 Ecology. Second, Monsanto is free to cross examine Dr. Rodenburg at trial about whether or not
 4 Air1 is best described as consisting of Monsanto's PCBs or something else.

5 Monsanto also suggests that over 130 PCB congeners "have been identified as byproduct
 6 in nature." Mot. at 8. This is misleading. While byproduct PCBs have been detected in a variety
 7 of products, often in very small concentrations, Monsanto offers no evidence that PCBs from all
 8 of these products ever have been found in the environment. Moreover, because Monsanto's
 9 PCBs are found in the atmosphere, it is possible that the PCBs in some of these products are in
 10 fact Monsanto's. Mueller Decl., Ex. B, Rodenburg Dep. Transcript at 308:5–19. And Dr.
 11 Rodenburg's own work, and the work of other scientists, has identified byproduct PCBs as a
 12 significant source of PCBs to the environment in only two cases. DeBord Decl., Ex. A,
 13 Rodenburg Report at 11.

14 Finally, Monsanto criticizes Dr. Rodenburg for her interpretation of the r^2 values
 15 generated by MLR. See Mot. at 9–10. But Dr. Rodenburg used the same interpretation in a peer-
 16 reviewed paper published in 2020. DeBord Decl., Ex. A, Rodenburg Report at 12; Mueller
 17 Decl., Ex. C, Chitsaz et al. (2020) at 3.³ As with its other critiques, Monsanto can cross-examine
 18 Dr. Rodenburg on her interpretation of r^2 values at trial. But her interpretation of r^2 values is not
 19 a basis on which to exclude her testimony.

20 As in *Sanft*, this Court should deny Monsanto's motion to exclude Dr. Rodenburg.

21 IV. CONCLUSION

22 For the foregoing reasons, Plaintiff City of Seattle respectfully requests that the Court
 23 deny in its entirety Monsanto's motion to exclude or limit the expert testimony of Lisa
 24 Rodenburg.

25
 26³ This paper was published after Dr. Rodenburg deposition in the Spokane PCB litigation.

PL. OPPOSITION TO DEFS.'
 MOTION EXCLUDE EXPERT
 TESTIMONY BY DR. LISA
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(2:16-cv-00107-RAJ-MLP) – 12

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